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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/360,440	07/26/1999	ROBERT M. CRAIG	MS140696.1/4	4197

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EXAMINER

TO, BAOQUOC N

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/360,440

Applicant(s)

CRAIG, ROBERT M.

Examiner

Baoquoc N To

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-32 are presented for examination.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/26/99 and 08/20/01. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung (US. Patent No. 5,822,580).

Regarding on claim 1, Leung teaches a computer program storage medium readable by a computing system and encoding a computer program for executing a computer process providing access to configuration information sourced by at least one data store, the access being substantially specified by at least one input parameter; the computer comprising:

Providing a first level table object (global registry) (col. 8, lines 39-41) instantiated in accordance with a input parameter (parameter), the first level table object including a first table-oriented interface having a first table-oriented method (col. 8, lines 45-53);

Receiving a call (AIP allows client applications to retrieve entries from the registry 300) to the first table-oriented method in the first level table object (col. 10, lines 42-44 and col. 13, lines 1-12);

Executing a logic component module (API) responsive to the call, if the first level table object provides domains-specific logic corresponding to the first table-oriented method (col. 13, lines 1-12); and

Leung does not explicitly teach delegating the call to a responding table-oriented method of a lower-level table object to which the first level table object is bound, if the first level table object depends on the lower-level table object to completely service the call. Leung teaches, "the API call the client application (i.e., caller) generates a query based on a set of attributes...the precise interface through which client applications can retrieve objects from the class registry is described in the following description" (col. 13, lines 1-25). This teaches the AIP is the caller to object library for class and retrieve for the user. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include the API the caller for objects in the library and to retrieve the classes for the user to implement.

Regarding on claim 2, Leung teaches the lower-level table object supports a second table-oriented interface identical to the first table-oriented interface of the first level table object (col. 8, lines 53-58).

Regarding on claim 3, Leung teaches the delegating operation comprises:

Replacing in a vtable an address to the first table-oriented method in the first level table object with an address to the corresponding table-oriented method of the lower-level table object (col. 7, lines 30-67).

Regarding on claim 4, Leung teaches the operation of executing a logic component module comprises:

Intercepting the call to the first table-oriented method (col. 13, lines 6-10);

Executing the domain-specific logic in a supplement logic module of the first level table object, responsive to the call received by the first level table object (col. 13, lines 6-10).

Regarding on claim 5, Leung teaches the operation for executing the domain-specific logic comprises:

Enforcing complex relationships between a first column and a second column of a logic level table presented to a caller by the first level table object before the datastore is updated (col. 13, lines 18-25).

Regarding on claim 6, Leung teaches the operation for executing the domain-specific logic comprises:

Enforcing complex relationships between a logic level table presented to a caller by the first level table object and a second virtual table before the datastore associated with the logic level table is updated (col. 13, lines 18-25).

Regarding on claim 7, Leung teaches the operation for executing the domain-specific logic comprises:

Filtering the configuration information (look up) accessible by a caller depending on a security level associated with the caller (col. 13, lines 6-11).

Regarding on claim 8, Leung teaches the operation for executing logic component module comprises:

Intercepting the call (API) to the first table-oriented method from a caller, the call being associated with a first coordinate in a logic level table presented to the caller by the first level table object (col. 13, lines 6-10); and

Mapping the first coordinate to a second coordinate in a lower-level table presented to the first level table object by the lower-level table object (col. 18, lines 15-27).

Regarding on claim 9, Leung teaches the operation for executing a logic component module comprises:

Intercepting the call to the first table-oriented method from a caller (API), the call being associated with a first coordinate in a logic level table presented to the caller by the table oriented interface and having no corresponding coordinate in a lower-level table presented by the lower-level table object (col. 13, lines 1-12);

Synthesizing data to provide synthesized data associated with the first coordinate in the logic level table; and

Returning the synthesized data to the caller (col. 13, lines 1-12).

Regarding on claim 10, Leung teaches the operation for synthesizing data comprises:

Accessing lower-level data from at least a second coordinate in the lower-level table (col. 14, lines 20-30); and

Determining the synthesized data based on the lower-level data (col. 14, lines 20-30).

Regarding on claim 11, Leung teaches the operation for executing a logic component module comprises:

Triggering an operation external to the first level table object and the lower-level object (col. 8, lines 24-35).

Regarding on claim 12, Leung teaches the operation for triggering an operation comprises:

Triggering a custom activator to provide external activation processing (col. 8, lines 24-35).

Regarding on claim 13, Leung teaches the computer process further comprises:

Storing a pointer to the lower-level object usable to access to a lower-level table-oriented method of the lower-level table object (col. 15, lines 1-5).

Regarding on claim 14, Leung teaches the delegating operation comprises:

Delegating the call to a corresponding table-oriented method of another lower-level table object to which the first level table object is also bound, if the first level object depends on the other lower-level table object to completely service the call (col. 13, lines 1-25).

Regarding on claim 15, Leung teaches the computer process further comprises:

caching read data from the lower-level table object in a read cache of the first level table object (col. 13, lines 1-10).

Regarding on claim 16, Leung teaches the computer process further comprises:

Caching write data intended for the lower-level table object in a write cache of the first level table object (col. 13, lines 1-10).

Regarding on claim 17, Leung teaches a logic table object, executable by a computer, providing access to configuration information sourced by at least one datastore, the access being substantially specified by at least one input parameter, the logic table object comprising:

A table-oriented interface including a table-oriented method accessible by a caller to access the configuration information and receiving a call from the caller to the table-oriented method (objects in the library) (col. 13, lines 1-12);

A logic component module (API) providing domain-specific logic to the table-oriented method (col. 13, lines 1-12);

Leung does not explicitly an interception/delegation module executing the domain-specific logic of the logic component module, responsive to receipt of the call, and further delegating the call to a corresponding table-oriented method of a lower-level table object to which the logic table object is bound, if the logic table object depends on the lower-level table object to completely service the call. Leung teaches, "the API call the client application (i.e., caller) generates a query based on a set of attributes...the precise interface through which client applications can retrieve objects from the class registry is described in the following description." (col. 13, lines 1-25). This teaches the AIP is the caller to object library for class and retrieve for the user. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include the API the caller for objects in the library and to retrieve the classes for the user to implement.

Regarding on claim 18, Leung teaches the logic component module includes a mapping module for translating a first coordinate of a logic level table presented by the logic table object to a second coordinate in a lower-level table presented to the logic table object by the lower-level table object (col. 18, lines 10-26).

Regarding on claim 19, Leung teaches the logic component modules includes a mapping lookup table having entries corresponding to coordinates of the logic level table, one or more of the entries including mapping instructions to corresponding coordinates in the lower-level table (col. 18, lines 10-26).

Regarding on claim 20, teaches the logic component module includes a supplemental logic module having a domain-specific logic to supplement functionality of the lower-level table object, responsive to the call received by the logic table object (API call) (col. 13, lines 6-11).

Regarding on claim 21, Leung teaches the supplement logic module triggers an external operation, responsive to the cal (API) (col. 13, lines 6-11).

Regarding on claim 22, Leung teaches the logic component module includes a synthesizing module synthesizing data associated with a first coordinate in a logic level

table presented to the caller by the logic table object, wherein no corresponding coordinate exist in a lower-level table presented by the lower-level table object.

Regarding on claim 23, Leung teaches the table-oriented interface supported by the logic table object is identical to a second table-oriented interface supported by the lower-level object to which the logic table object is bound (col. 13, lines 6-11).

Regarding on claim 24, Leung teaches a first field storing a first pointer to the lower-level object, the pointer being usable to access to a lower-level table-oriented method of the lower-level table object (col. 15, lines 1-5).

Regarding on claim 25, Leung teaches a second field storing a second pointer to another lower-level table object, and wherein the logic component module comprises a mapping module translating a first coordinate of a logic level table presented by the logic table object to a second coordinate in a lower-level table presented to the logic table object by one of the lower-level table objects (col. 15, lines 1-5).

Regarding on claim 26, Leung teaches a vtable storing an address to the corresponding table-oriented method of the lower-level table object that corresponds to the table-oriented method of the logic table object called by the caller (col. 7, lines 30-67).

Regarding on claim 27, Leung teaches a read cache for caching data received from the lower-level table object (col. 13, lines 1-10).

Regarding on claim 28, Leung teaches a write cache for caching data to be written to the lower-level table object (col. 13, lines 1-10).

Regarding on claim 29, Leung teaches computer data signal embodied in a carrier wave by a computing system and encoding a computer program for executing a computer process providing access to requested configuration information through a first level table object including a first table-oriented interface having a first table-oriented method; the computer program comprising:

Receiving a call (API call) to the first table-oriented (client application) method in the first level table object (col. 13, lines 1-6);

Intercepting the call to provide supplemental logic, if the first level table object provides domain-specific logic corresponding to the first table-oriented method; and

Leung does not explicitly delegating the call to a corresponding table-oriented method of a lower-level table object to which the first level table object is bound, if the first level table object depends on the lower-level table object to completely service the call. Leung teaches, "the API call the client application (i.e., caller) generates a query based on a set of attributes...the precise interface through which client applications can retrieve objects from the class registry is described in the following description." (col. 13, lines 1-25). This teaches the AIP is the caller to object library for class and retrieve for

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the user. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to include the API the caller for objects in the library and to retrieve the classes for the user to implement.

Regarding on claim 30, Leung teaches the first level table object is instantiated in accordance with an input parameter to present a table of the requested configuration data (col. 8, lines 45-53).

Regarding on claim 31, Leung teaches the computer process further comprises:
Delegating the call (API) to a corresponding table-oriented method of another lower-level table object to which the first level table is also bound, if the first level table object depends on the other lower-level table object to completely service the call (col. 13, lines 1-25).

Regarding on claim 32, Leung teaches the computer process further comprises:
Referencing a mapping lookup table to determine which lower-level table object are delegated the table-oriented method call (col. 12, lines 50-60).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.


The fax numbers for the organization where this application or proceeding is assigned are as follow:

- (703) 746-7238 [After Final Communication]]
- (703) 746-7239 [Official Communication]
- (703) 746-7240 [Non-Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA 22202
Fourth Floor (Receptionist).

Baoquoc N. To
Nov 28, 2003


SHAHID ALAM
PRIMARY EXAMINER

